

# ABSTRACT

A diversity OFDM communication is performed between a base terminal and a mobile terminal, both having a horizontal polarization antenna and a vertical polarization antenna forming two transmission channels. In the base terminal, data signals to be transmitted are divided into two channels to transmit the data signals through either one of the channels having a higher transmission performance for each sub-carrier. Common pilot signals are transmitted through both channels. The data signals received by the mobile terminal are phase-adjusted using the common pilot signals. The phase-adjusted data signals in both channels are synthesized and then demodulated.